

## REMARKS

In the Office Action mailed from the United States Patent and Trademark Office April 9, 2008, claims 1-7, 12-14, 16, 17, 19-22, 24-26, 29-34, 37-39, 43-45, 47-49 and 52-58 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wells et al (U.S. Patent No. 5,505,409, "Wells") in view of Fronek et al (U.S. Patent No. 5,848,769, "Fronek") and Mulholland (U.S. Patent No. 2,575,185, "Mulholland"); and claims 1-14, 16, 17, 19-22, 24-43 and 45-58 were rejected under 35 U.S.C. 103(a) as being unpatentable over Falco (U.S. Patent No. 5,133,519, "Falco") in view of Fronek et al. and Mulholland (U.S. Patent No. 2,575,185, "Mulholland"). Accordingly, Applicant respectfully provides the following:

### Rejections Under 35 U.S.C. § 103(a)

Applicant respectfully submits that the prior art references cited alone or in combination do not teach or suggest each of the limitations. M.P.E.P. § 2141 sets forth the *Graham* factual inquiries that should be considered when making an obviousness rejection under Section 103: 1) ascertaining the scope and content of the prior art; 2) ascertaining the differences between the claimed invention and the prior art; and 3) resolving the level of ordinary skill in the pertinent art. (Citing *Graham v. John Deere*, 383 U.S. 1, 148 USPQ 459 (1966).) In addition, M.P.E.P. §§ 2141 and 2142 set forth that "the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit." (Citing *KSR International Co. v. Teleflex Inc. (KSR)*, 550 U.S. \_\_\_, 82 USPQ2d 1385 (2007).)

The M.P.E.P. provides several examples of rationales that can support a rejection under 35 U.S.C. § 103, namely:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

(M.P.E.P. §§ 2141 & 2143, emphasis added.) As may be seen from the emphasized portions of the above potential rationales, each rationale is dependent on showing known elements from the prior art corresponding to the limitations of the claimed invention. Each rationale therefore depends on: 1) satisfying the *Graham* inquiry, showing that the scope and content of the prior art included each limitation contained in the claimed invention, and 2) satisfactorily showing that one of ordinary skill in the art would take the art teachings to overcome the identified differences under *Graham* between the claimed invention and the individual teachings of the prior art.

Applicant respectfully submits that the references cited by the Examiner, either alone or in combination, do not teach or suggest all the limitations claimed in the claim set provided herein. In particular amended claim one is drawn to an external fluid flow regulator incorporated into the surface of an object for regulating pressure gradients and influencing fluid flow across said surface, said regulator comprising: a removeably attached fluid flow regulator comprising: a leading edge comprising a surface capable of receiving a fluid thereon; an pressure recovery drop orthogonally disposed relative to the leading edge that extends a pre-determined distance away from said leading edge and said fluid and its flow, wherein said pressure recovery drop comprises at least one drop face therein, said at least one drop face having a pre-determined height, wherein the height of a drop face varies along the length of a given drop face, and wherein the drop face further comprises a length of a blended segment which transitions between the variable heights along the length of a given drop face said pressure recovery drop functions to regulate existing pressure gradients along said surface to optimize and equalize said fluid flow, wherein said regulation of said pressure gradients positively influences the flow properties and behavior of said fluid across said surface of said object, and the performance of said object subject to said fluid flow; a sub-atmospheric barrier that is suddenly generated as said fluid encounters and flows over said pressure recovery drop, said sub-atmospheric barrier comprising a low pressure area of fluid molecules having decreased kinetic energy that serve as a cushion between said higher kinetic energy fluid molecules in said fluid and the molecules at said surface to facilitate laminar flow and assist in the reduction of the separation potential of said fluid; and a trailing edge orthogonally disposed relative to the recovery drop that defines and extends from the base of said pressure recovery drop that provides

a trailing flow boundary for said fluid. Independent claims 21, 31, 32, 38, 43, 56 and 57 contain similar limitations.

The independent claims of the present application therefore require that the height of a drop face varies along the length of a given drop face and wherein the drop face comprises length of a blended segment which transitions between variable height drop faces along the length of a given drop face. These limitations are supported by the disclosure as originally filed. And, none of the references cited by the Examiner, alone or in combination, teaches or suggests such limitations.

Accordingly, Applicant respectfully submits that for at least the reasons provided herein, the references cited by the Examiner, alone or in combination, do not teach or suggest all the limitations of independent claims 1, 21, 31, 32, 38, 43, 56 and 57. And, because the references cited by the Examiner do not teach or suggest each and every limitation of independent claims 1, 21, 31, 32, 38, 43, 56 and 57, Applicant respectfully submits that the prior art references do not make obvious independent claims 1, 21, 31, 32, 38, 43, 56 and 57, as provided herein.

Because the prior art references do not make obvious independent claims 1, 21, 31, 32, 38, 43, 56 and 57, Applicant respectfully submits that the prior art references cited by the Examiner do not make obvious the corresponding dependent claims, which depend from independent claims 1, 21, 31, 32, 38, 43, 56 and 57.


Because the art cited in the pending Office Action fails to teach or fairly suggest that the height of a drop face varies along the length of a given drop face and wherein the drop face comprises length of a blended segment which transitions between variable height drop faces along the length of a given drop face, Applicant respectfully request that the rejections under 35 U.S.C. § 103 (a) be withdrawn at this time.

### CONCLUSION

Applicants submit that the amendments made herein do not add new matter and that the claims are now in condition for allowance. Accordingly, Applicants request favorable reconsideration. If the Examiner has any questions or concerns regarding this communication, the Examiner is invited to call the undersigned.

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Respectfully submitted,



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